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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,750	01/19/2005	Philip John Oakley	038665.55828US	6892

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EXAMINER	
KO, TONY	

ART UNIT	PAPER NUMBER
2878	

DATE MAILED: 09/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/521,750	OAKLEY, PHILIP JOHN	
	Examiner	Art Unit	
	Tony Ko	2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13 and 15-18* is/are rejected.

7)☒ Claim(s) *14* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 January 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *1/19/05, 7/27/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-8, 11-13, 15-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Fossum (U.S. Patent 6,137,100).

4. Regarding claim 1, Fossum discloses (Figs. 1B and 4A) a pixilated detector for providing an image signal representing an object, the detector comprising an array of sensing pixels (detector shown in 4A) for generating image data from different respective areas of the object, the image data together providing the image signal, wherein the outlines of at least two pixels in the array are different.

5. Regarding claim 2, Fossum discloses the outlines of at least two of the pixels enclose different areas (406 and 410).

6. Regarding claim 3, Fossum discloses the outlines of at leasttwo of the pixels are non-circular and show rotation with respect to one another in the detector

7. Regarding claim 4, Fossum discloses the outlines of at least two of the pixels have different shapes (400 and 410).

8. Regarding claim 5, Fossum discloses at least one of the pixels has an irregular outline. That is, pixels 410 and 400 are not symmetric about any axis.

9. Regarding claim 6, as understood, Fossum discloses the irregular outline is jittered. That is, pixel 400 is jittered out of smooth alignment with adjacent pixel 406.

10. Regarding claim 7, Fossum discloses (Fig. 4A) the outline of at least one of the pixels shows no symmetry.

11. Regarding claim 8, Fossum discloses the pixels of the detector do not fill a tessellation grid (area 408).

12. Regarding claims 11-13, Fossum discloses the array of sensing pixels comprises a distribution of pixels over the array which, in at least one direction across the array (4B), have outlines with different dimensions (dimensions of the shapes) in said at least one direction; Fossum further discloses the array of sensing pixels comprises a distribution of pixels over the array which, in at least two different directions across the array, have outlines with different dimensions (400 and 406) in each of said at least two directions. Fossum also discloses the outlines of at least some of the pixels in the array are generally based on a parallel – sided outline.

13. Regarding claims 15 and 16, Fossum discloses wherein the array of pixels has more than one associated tessellation grid. Fossum further discloses the image data are independent of, or in addition to, color.

14. Regarding claim 17, Fossum discloses the detector is provided with a signal processor for processing image signals generated by the detector, wherein the processor is adapted to process a first image signal generated by the detector and a second image signal generated by the detector to generate a third image signal having improved resolution.

15. Claims 1-4, 6-9, 11-13, 15-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Resnikoff (U.S. Patent 4,574,311)

16. Regarding claim 1, Resnikoff discloses (Figs. 6 and 8-11) a pixilated detector (60) for providing an image signal representing an object, the detector comprising an array of sensing pixels for generating image data from different respective areas of the object, the image data together providing the image signal, wherein the outlines of at least two pixels (the different shape detectors shown in figure 8) in the array are different.

17. Regarding claim 2, Resnikoff discloses the outlines of at least two of the pixels enclose different areas (Fig. 8).

18. Regarding claim 3, Resnikoff discloses the outlines of at least two of the pixels are non-circular and show rotation with respect to one another in the detector

19. Regarding claim 4, Resnikoff discloses the outlines of at least two of the pixels have different shapes (Fig. 8).

20. Regarding claim 5, Resnikoff discloses at least one of the pixels has an irregular outline (Fig. 8).

21. Regarding claim 6, Resnikoff discloses the irregular outline is jittered. That is the irregular shape of the detector is jittered.

22. Regarding claim 7, Resnikoff discloses (Fig. 8) the outline of at least one of the pixels shows no symmetry.

23. Regarding claim 8, Resnikoff discloses the pixels of the detector do not fill a. tessellation grid.

24. Regarding claim 9, Resnikoff discloses the outlines of at least three pixels of the detector are irregularly spaced from one another.

25. Regarding claims 11-13, Resnikoff discloses the array of sensing pixels comprises a distribution of pixels over the array which, in at least one direction across the array (4B), have outlines with different dimensions (dimensions of the shapes) in said at least one direction; Resnikoff further discloses the array of sensing pixels comprises a distribution of pixels over the array which, in at least two different directions across the array, have outlines with different dimensions (Fig. 8) in each of said at least two directions. Resnikoff also discloses the outlines of at least some of the pixels in the array are generally based on a parallel – sided outline.

26. Regarding claims 15 and 16, Resnikoff discloses wherein the array of pixels has more than one associated tessellation grid. Resnikoff further discloses the image data are independent of, or in addition to, color. (i.e. intensity)

27. Regarding claim 17, Resnikoff discloses the detector is provided with a signal processor (the processing unit determines how/when the signals are transported) for processing image signals generated by the detector, wherein the processor is adapted

to process a first image signal generated by the detector and a second image signal generated by the detector to generate a third image signal having improved resolution. That is, combine the signals from all the detectors.

28. Regarding claim 18, Resnikoff discloses a method of obtaining an image of an object using a pixilated detector, the method comprising the steps of: 1) obtaining a first series of output signals (from vertical registers) from respective pixels of the detector representing a first image of the objects; 2) obtaining a second series of output signals from respective pixels of the detector; and 3) processing the first and second series of output signals to produce a digital (36) representation of the object, wherein at lest one output signal from each of the first and second series, relating to the same position on the object , is obtained from a different respective pixel, said different respective pixels having different outlines with respect to one another.

Claim Rejections - 35 USC § 103

29. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

30. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Resenikoff.

31. Regarding claim 10, Resenikoff discloses the invention set forth above. Resenikoff does not disclose a motion control apparatus for producing controlled motion of the detector relative to an object in use. It is well known to have a motion control apparatus for producing controlled motion of the detector relative to an object in use. It would have been obvious to a person of ordinary skill in the art at the time of the invention to adept a motion control apparatus for producing controlled motion of the detector relative to an object in use to place the detector to a desired position to capture the object images.

Allowable Subject Matter

32. Claim 14 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

33. The following is a statement of reasons for the indication of allowable subject matter: prior art does not disclose the array of pixels comprises a herringbone pattern of rectangular pixels, provided by two sub-arrays of pixels, the long dimensions of the pixels of one sub-array being parallel to one another and slanted with respect to the long dimensions of the pixels of the other sub-array.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent 6,133,991 and U.S. Patent 6,806,456 are in related field.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony Ko whose telephone number is 571-272-1926. The examiner can normally be reached on Monday-Friday 7:30 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on 571-272-2328. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TKO

THANH X. LUU
PRIMARY EXAMINER